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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,268	08/01/2003	Robert B. Wirtz	A91774	3356
7590	08/24/2005			
ROBERT W. BECKER & ASSOCIATES Suite B 707 Highway 66 East Tijeras, NM 87059			EXAMINER SAN MARTIN, EDGARDO	
			ART UNIT 2837	PAPER NUMBER

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,268

Applicant(s)

WIRTZ, ROBERT B.

Examiner

Edgardo San Martin

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/1/03; 2/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter described in claims 19 and 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:
 - The Headings for "Summary of the Invention" and "Detailed Description of the Invention" are missing.

Appropriate correction is required.

Claim Objections

3. Claim 14 is objected to because it includes reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 – 6, 15, 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 4 recites the broad recitation "wherein a total surface area of the orifices of the resonance pipe ranges from 200 to 500 mm²", and the claim also recites "especially 350 to 400 mm²" which is the narrower statement of the range/limitation.

Claim 5 recites the broad recitation "wherein the orifices of the resonance pipe are circular and have a diameter ranging from 1 to 4 mm", and the claim also recites "especially approximately 2 mm" which is the narrower statement of the range/limitation.

Claim 6 recites the broad recitation "wherein the resonance pipe is provided with 100 to 150, ..., of the orifices", and the claim also recites "especially approximately 120" which is the narrower statement of the range/limitation.

Claim 18 recites the broad recitation "wherein the resonator chamber is packed with glass fibers", and the claim also recites "especially glass wool" which is the narrower statement of the range/limitation.

Claim 15 recites the limitation "the two half shells" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the two half shells" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 – 3, 8, 9, 14 – 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Trudell (US 4,116,303).

With respect to claim 1, Trudell teaches an exhaust muffler for a motor comprising a muffler housing that encloses at least one damping chamber (Fig.1, Item 32) and has an inlet (Fig.1, Item 18) for exhaust gases from the motor and an outlet (Fig.1, Item 44), wherein a resonator chamber (Fig.1, Item 34) is provided in the housing and is closed off so as to be substantially fluid-tight relative to the at least one damping chamber, wherein a resonance pipe (Fig.1, Item 22) that conveys exhaust gases is guided through the resonator chamber, and wherein an acoustic link (Fig.1,

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Items 36) is provided between the resonance pipe and the resonator chamber (Col.2, Line 34 – Col.4, Line 45).

With respect to claims 2, 3, 8, 9, 14 and 17, the Examiner considers that Trudell teaches the limitations described in the claims (Fig.1; Col.2, Line 34 – Col.4, Line 45).

With respect to claim 15, Trudell teaches wherein the spacing is at least 30% of a length of the muffler housing (Col.2, Lines 63+).

With respect to claim 16, Trudell teaches wherein a portion of the resonance pipe that projects out of the resonator chamber into the at least one damping chamber extends approximately parallel to a longitudinal central axis extending approximately in a direction of a length of the exhaust muffler (Fig.1).

With respect to claim 18, Trudell teaches wherein the resonator chamber is packed with glass fibers (Fig.1, Item 38), especially glass wool (Col.3, Lines 53 – 55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 – 7, 10 – 13, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trudell (US 4,116,303).

With respect to claims 4 – 6, Trudell teaches the limitations discussed in a previous rejection, but fail to disclose wherein a total surface area of the orifices of the

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resonance pipe ranges from 200 to 500 mm², or wherein the orifices have a diameter ranging from 1 to 4 mm, or wherein the resonance pipe is provided with 100 to 150 of the orifices.

The Examiner considers that it would have been an obvious matter of design choice to provide a certain total surface area or a certain diameter or a certain amount of the orifices, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233; in addition, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to claim 7, the Examiner considers that it would have been an obvious matter of design choice to extend the resonance pipe in a curved manner in the resonator chamber because it would not depart from the scope of the Trudell invention, and the Applicant does not disclose the criticality or any other advantage over the prior art for such limitation.

With respect to claims 10 – 12, the Examiner takes Official Notice that it is well known in the art of muffler building to provide a muffler with two half shells, in order to facilitate the assembly of mufflers that include internal parts or elements, such as catalysts, pipes or baffles.

With respect to claim 13, the Examiner have given little patentable weight to the limitations described in the claim, since the presence of process limitations on product

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claims, which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. In re Stephens 145 USPQ 656 (CCPA 1965).

With respect to claims 19 and 20, the Examiner takes Official Notice that it is well known in the art of acoustics to provide a muffler with multiple chambers in order to increase the performance of the muffler by improving the expansion of the exhaust gas; furthermore, it is well known in the art to employ a catalyst member in combination with a muffler chamber, in order to provide a cleaner exhaust gas.

Conclusion

7. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "E. San Martín".

Edgardo San Martín
Primary Examiner
Art Unit 2837
Class 181
August 21, 2005